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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/876,277	06/07/2001	Brian S. Forbes	INTL-0577-US (P11464)	8806

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EXAMINER
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CONNOLLY, MARK A

ART UNIT	PAPER NUMBER
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2115

DATE MAILED: 02/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/876,277

Applicant(s)

FORBES ET AL.

Examiner

Mark Connolly

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 28 December 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All   b) ☐ Some \*   c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

### DETAILED ACTION

1. Claims 1-34 have been presented for examination.

#### ***Claim Rejections - 35 USC § 101***

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claims 1-34 rejected under 35 U.S.C. 101 because the disclosed invention is inoperative and therefore lacks utility.

4. Claims 1, 11 and 19 recite, “conducting from a supply voltage plane of the computer to ground in the absence of a voltage on the supply plane.” Ohms Law states that the relationship between voltage (V), current (I) and resistance (R) is  $V = I * R$ . Since  $R \neq 0$ , it is impossible to have current without voltage. Therefore, in order to current to flow from the supply voltage plane to ground, there must be some voltage present on the voltage supply plane.

#### ***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 1-34 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The specification does not explain how it is possible to conduct current from a supply voltage plane to ground in the *absence* of a voltage on the supply voltage plane.

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7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 1-34 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The specification explicitly teaches that power is being supplied to the supply voltage plane by a powered peripheral [page 3 lines 9-12]. Therefore, the supply voltage plane is not absent of voltage. For examination purposes, it has been interpreted that “conducting a current from a supply voltage plane of the computer to ground in the absence of a voltage on the supply voltage plane” actually means “conducting a current from a supply voltage plane of the computer to ground in the absence of a voltage *from a voltage supply* on the supply voltage plane.”

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 1-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicants Admitted Prior Art [AAPA] in view of Price US Pat No 5900768.

11. Referring to claim 1, the AAPA teaches the invention substantially including a supply voltage plane not receiving power from a power resource of the computer in response to a predetermined sleep state [page 1 lines 19-21]. The lowest power sleep state is interpreted as the predetermined sleep state.

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The AAPA does not teach:

- a. in response to the computer being in a predetermined sleep state, conducting a current from a supply voltage plane of the computer to ground in the absence of a voltage from a voltage supply on the supply voltage plane to prevent a back-driven voltage on the supply voltage plane
- b. in response to the computer being in a predetermined state other than the predetermined sleep state, halting the conduction of the current.

In summary, the AAPA does not teach grounding the power plane when the power supply is disconnected from the computer to prevent back-driven voltage and removing the power plane from ground when the power supply is reconnected to the computer.

Price teaches grounding a power plane while a power supply is disconnected from the computer to prevent back-driven voltage and removing the power plane from ground when the power supply is reconnected to the computer [col. 1 lines 14-19 and 55-67, col. 2 lines 39-49 and col. 3 lines 26-33]. When grounding the voltage supply plane, any voltage present on the plane would be drawn to ground and current would be conducted through the load coupling the voltage supply plane and ground. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the AAPA system to ground the power plane when the power supply is disconnected from the computer and removing the power plane when the power supply is reconnected because it will provide a means to prevent initialization problems associated with floating power lines yet still maintain efficiency of the power supply [col. 1 lines 20-30 and 63-67]. It is interpreted in the AAPA-Price system that the power supply is disconnected during a

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predetermined sleep state and reconnected once the computer wakes from the predetermined sleep state.

12. Referring to claim 2, waking from the predetermined sleep state is interpreted as a higher power state than a sleep state since the predetermined sleep state is the lowest power sleep state as described above.

13. Referring to claim 3, the AAPA teaches that there are higher power sleep states which the computer can enter [page 1 lines 11-18].

14. Referring to claim 4, the AAPA teaches a range of sleep states that remove the power supply from the computer [page 1 lines 16-21].

15. Referring to claim 5, the AAPA teaches that the range of sleep states comprise the lowest power sleep states [page 1 lines 16-21].

16. Referring to claim 6, Price teaches controlling a voltage on a supply voltage plane produced by a powered peripheral [col. 1 lines 26-30 and col. 2 lines 39-49]. Holding the supply voltage plane at ground is interpreted as controlling.

17. Referring to claims 7 and 8, Price teaches activating and deactivating a switch to establish and remove a path between the supply voltage plane and ground [208 Fig. 2].

18. Referring to claim 9, it is obvious that in the AAPA-Price system that the power supply must be coupled to the computer when awaking from the predetermined sleep state so that power can be supplied to the computer.

19. Referring to claim 10, the AAPA teaches that the power is supplied through a voltage regulator [page 1 lines 19-21].

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20. Referring to claims 11-26, these are rejected on the same basis as set forth hereinabove.

The AAPA and Price teach the method and therefore teach the system performing the method.

21. Referring to claim 27, Price teaches grounding the supply voltage plane [col. 1 lines 14-19 and col. 2 lines 39-49].

22. Referring to claim 28, Price teaches providing a “very low impedance between the power line 202 and return line 206” [col. 3 lines 21-22]. It is obvious that this impedance could be between 1-10 ohms because 1-10 ohms is a very low impedance.

23. Referring to claims 29-32, these are rejected on the same basis as set forth hereinabove.

24. Referring to claim 33, Price teaches coupling a load between the supply and ground [abstract and col. 3 lines 16-25].

25. Referring to claim 34, it is obvious that the coupling would only last the duration of the sleep state because otherwise the system would be inoperable since the supply voltage plane would be grounded.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Connolly whose telephone number is (571) 272-3666. The examiner can normally be reached on M-F 8AM-5PM (except every first Friday).


If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Thomas C Lee can be reached on (571) 272-3667. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Mark Connolly  
Examiner  
Art Unit 2115

mc  
February 10, 2005



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